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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/749,300

12/31/2003

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5760-18600

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12/11/2007

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EXAMINER

TRUONG, LECHI

ART UNIT

PAPER NUMBER

2194

MAIL DATE

DELIVERY MODE

12/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/749,300

Applicant(s)

BANERJEE ET AL.

Examiner

LeChi Truong

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

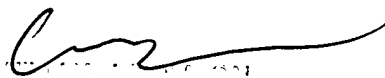
Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


SUPERVISOR, PATENT EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-20 are presented for the examination. Claims 21-22 are canceled.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending application serial no: 11/229965. Although the conflicting claims are not identical, they are not patentably distinct from each other because both computer systems comprise substantially the same elements. The differences between claims 1, 12, 14, 18, 21 of this case and the copending application are reply to the second message. It would have been obvious to one of the ordinary skill level in the art to include reply the second message since it was well known at the time of the invention to improve the efficiency for transaction recovery in three-tier application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-22 rejected under 35 U.S.C. 103(a) as being unpatentable over Frolund et al (US 6,434,555 B1) in view of Johnson et al (US 6,338,146 B1) and further in view of Svend et al (US Patent 6,381,617 B1).

As to claim 1, Frolund teaches a processor (processor 24, processor 28, col 3, ln 45-50), a client application (client machine 200, col 3, ln 55-60/col 8, ln 24-26/ Fig. 2), transaction (transaction 116, col 3, ln 60-65/ col 8, ln 24-26/ Fig.2), receiving a request from a client application, wherein the request requires a transaction (col 3, ln 60-65/ col 8, ln 24-26/ Fig.2), a first message (a prepare message 422, col 6, ln 8-11), plurality of participant nodes (the databases DB1 404, through DBn 406, col 6, ln 5-10/ database 104, col 4, ln 1-5), in response to the request, sending a first message to a plurality of participant nodes participating in the transaction(col 6, ln 10-14), a reply to the first message(message 424, col 6, ln 10-14), in response to receiving a reply to the first message from at least a quorum of the participant nodes(col 6, ln 10-14), a second message(a commit message 426, col 6, ln 12-15), sending a second message to the plurality of participant nodes(col 6, ln 12-15), a replay to the second message(acknowledgement messages 428, col 6, ln 12-16), in response to receiving a reply to the second message from at least a quorum of the participant nodes(col 6, ln 12-18), returning success to

the client application(col 4, ln 5-15), sending a third message to the plurality of participant nodes(col 6, ln 20-16/ col 7, ln 13-20),

Frolund does not explicitly teach memory. However, Johnson teaches memory (Shared memory, col 3, ln 10-15).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the teaching of Frolund to incorporate the feature of memory because this provides the incremental unit of expansion for implementing the transaction services.

Frolund and Johnson do not teach returning an indication to client application that the request was successfully processed, the third message instructs the participant nodes to commit the transaction. However, Svend teaches returning an indication to client application that the request was successfully processed, the third message instructs the participant nodes to commit the transaction (The STM 18-1 then sends a "prepare" 42 message to the DBS 22-1 and the DBS 22-2 to request a vote from the DBSs on whether they are able to commit to the transaction. The DBS 22-1 and the DBS 22-2 reply with a "vote" 44. The STM 18-1 stores the result of the "vote" 44 in stable storage by sending an "outcome" 46 to the STM 18-2 which replies with an "ack" 48. The STM 18-1 sends a "reply" 50 to the CTM 14 and a "commit" 52 command [third command] to the DBS 22-1 and the DBS 22-2. The "commit" 52 command instructs the DBS 22-1 and DBS 22-2 to commit the transaction to a determined state. The CTM 14 resends the "reply" 50 to the CA 12 and responds to the "reply" 50 with an "ack" 54. The DBS 22-1 and DBS 22-2 each respond to the "commit" 52 command with an "ack" 56, col 5, ln 54-62/ If the CTM 14 does not receive the "reply" 50, it needs to retry the method invocation. The CTM 14 should not perform

the retry if the transaction has already been committed at the server side since that would cause the transaction to be executed twice, col 6, ln 32-38/the votes are “yes”, col 8, ln 14-16).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the teaching of Frolund and Johnson with Svend to incorporate the feature of returning an indication to client application that the request was successfully processed, the third message instructs the participant nodes to commit the transaction because this allows client to be able to determine whether the database update will be performed or not.

As to claim 2, Frolund teaches the third message to the plurality of participant nodes comprises sending the third message after said returning success to the client application (col 6, ln 16-26).

As to claim 3, Frolund teaches the first message comprises a message requesting each of the participant nodes to reply by indicating whether they can commit the transaction (col 6, ln 8-12), said receiving the reply to the first message from at least a quorum of the participant nodes comprises receiving a reply indicating an ability to commit the transaction from at least a quorum of the participant nodes (col 6, ln 8-12).

As to claim 4, Frolund teaches the second message comprises a message requesting each of the participant nodes to enter a state indicating that the transaction is to be committed (col 6, ln 12-20); wherein said receiving the reply to the second message from at least a quorum of the participant nodes comprises receiving a reply indicating entrance into to the state indicating that the transaction is to be committed from at least a quorum of the participant nodes (col 6, ln 12-20).

As to claim 5, Johnson teaches the first message corresponds to a message for a first phase of a three phase commit protocol (col 2, ln 19-22).

As to claim 6, Johnson teaches the second message corresponds to a message for a second phase of a three-phase commit protocol (col 2, ln 12-10).

As to claim 7, Svend teaches sending the third message to the plurality of participant nodes completes the first node's involvement in transaction (col 5, ln 54-62).

As to claim 8, Frolund teaches completion of the transaction does not require a reply to the third message from any of the participant nodes (col 4, ln 17-20/ Fig. 2).

As to claim 9, Frolund teaches each participant node commits the transaction in response to receiving the third message but does not return a reply to the third message (col 4, ln 17-20/ Fig. 2).

As to claim 10, Frolund teaches the request comprises a request to update a file wherein the request requires a transaction to update multiple replicas of the file, wherein each replica is located on a participant node (col 1, ln 19-25/ col 5, ln 35-40).

As to claim 11, Johnson teaches the node is a node in a peer-to-peer network; the peer-to-peer network implements a distributed file sharing system (col 5, ln 59-67 to col 6, and ln 1-5).

As to claims 12-22, they are apparatus claims of claims 1, 2, 7-10, 12; therefore, they are rejected for the same reasons as claims 1, 2, 7-10, 12.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LeChi Truong whose telephone number is (571) 272 3767. The examiner can normally be reached on 8 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomson, William can be reached on (571) 272 3718. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

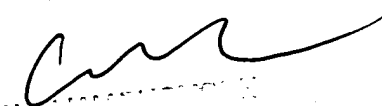
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may be obtained from either Private PAIR or Public PAIP. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIP system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

LeChi Truong

December 6, 2007


SUPERVISOR